Amateur Astronomy Society of Kenya

Last month we highlighted local planetarian, Kyle Doane, who was raising money to send a planetarium to Kenya. He needed $8,000 to refurbish and ship the planetarium system and an ultimate goal of $15,000 to send the planetarium to schools and community centers throughout East Africa. And thanks to all of you who donated, Kyle has reached over $9,000! The campaign is over, but it is not too late to help him reach his ultimate goal of raising $15,000. Please consider donating a few dollars to help inspire Kenyan children to be scientists who explore the skies. For more information, see his crowd-sourcing page at Start Some Good. Congratulations Kyle!

Don’t Miss This Photo of Phobos

Phobos and Deimos – Fear and Panic – are the two known moons of the red planet Mars. Here is the larger moon, Phobos, which orbits closely above Mars’ surface. ESA’s Mars Express spacecraft acquired this image in 2010.

According to Jason Major, who posted this image in his blog Lights in the Dark, Mars’ surface features appear slightly wavy due to motion of the Mars Express spacecraft’s camera, which gathers data line-by-line rather than as a single full-frame.

Since the Mars Express spacecraft began sending back science data from Mars orbit in early 2004, it has been granted five mission extensions, the latest until 2014.

Find links to more images and credits at Earthsky.org
When’s The Next Meteor Shower?

Two meteor showers converge every year in late July and August. The Delta Aquarid shower rambles along steadily with a nominal peak in late July, but this shower is still going strong when the Perseids peak around the mornings of August 11, 12 and 13. An hour or two before dawn usually presents the most favorable view of the Delta Aquarids and the Perseids, assuming the moon is out of the way. In late July 2013, the rather faint Delta Aquarid meteors will be at least partially drowned in the light of a bright last quarter moon on July 29. Try watching in early August, when the Perseid meteor shower is building to its peak and the light of the waning crescent moon is less obtrusive. Thanks to that waning moon in late July and early August, we’ll have moon-free skies for this year’s Perseid meteor shower. Follow the links to learn more.

Can you spot the meteor in the image above? (Hint: Look near the left edge of the image, halfway down.)

NASA Releases Images of Earth Taken by Distant Spacecraft

Color and black-and-white images of Earth taken by two NASA interplanetary spacecraft on July 19 show our planet and its moon as bright beacons from millions of miles away in space.

NASA’s Cassini spacecraft captured the color images of Earth and the moon from its perch in the Saturn system nearly 900 million miles away. MESSENGER, the first probe to orbit Mercury, took a black-and-white image from a distance of 61 million miles as part of a campaign to search for natural satellites of the planet.

In the Cassini images Earth and the moon appear as mere dots -- Earth a pale blue and the moon a stark white, visible between Saturn's rings. It was the first time Cassini's highest-resolution camera captured Earth and its moon as two distinct objects.

It also marked the first time people on Earth had advance notice their planet's portrait was being taken from interplanetary distances. NASA invited the public to celebrate by finding Saturn in their part of the sky, waving at the ringed planet and sharing pictures over the Internet. More than 20,000 people around the world participated.

"We can't see individual continents or people in this portrait of Earth, but this pale blue dot is a succinct summary of who we were on July 19," said Linda Spilker, Cassini project scientist, at NASA's Jet Propulsion Laboratory in Pasadena, Calif. "Cassini's picture reminds us how tiny our home planet is in the vastness of space, and also testifies to the ingenuity of the citizens of this tiny planet to send a robotic spacecraft so far away from home to study Saturn and take a look-back photo of Earth."

Read more about these images and find links to larger copies on NASA’s website.
How To Put A Human on Mars

One of Earth’s closest neighbors, Mars is still some 56 million km away at its closest alignment, a journey of at least nine months. Rovers have landed on the Red Planet and probes have scanned its surface, but what would it take to put a human on Mars? The BBC asked scientists from Imperial College London to design a mission which could take astronauts to the planet - and back. Watch the videos and explore this interactive to find out about their radical solution.

Discover the craft that could take us to Mars and the challenges that will be faced by astronauts on the 9 month journey to Mars. Also find out how they plan on returning to Earth when the mission is complete. It’s all here.

Interested in learning more about Mars and how to get there? Check out The Mars Society. Their mission is to further the exploration and settlement of The Red Planet. There’s even a local Dallas Chapter! Follow the link for information about meetings and events.

How High Is Space?

The first official definition of space came from the National Advisory Committee for Aeronautics (the predecessor to NASA), which decided on the point where atmospheric pressure is less than one pound per square foot.

This was the altitude that airplane control surfaces could no longer be used, and corresponded to roughly 50 miles, or 81 kilometers. Any NASA test pilot or astronaut who crosses this altitude is awarded their astronaut wings.

Shortly after that definition, the aerospace engineer, Theodore von Kármán, calculated that above an altitude of 100 km, the atmosphere would be so thin that an aircraft would need to be traveling at orbital velocity to derive any lift. This altitude was later adopted as the Karman Line by the World Air Sports Federation.

When Felix Baumgartner broke the record for the highest freefall in 2012, he jumped from an altitude of 39 kilometers, less than halfway to space, according to NASA’s definition. But the atmosphere of Earth extends far out into space.

Even though it orbits at an altitude of more than 400 kilometers, the International Space Station needs to be constantly boosted because of friction with the atmosphere.

But the Earth’s outer atmosphere, also known as the exosphere, extends out to an altitude of 10,000 km above the planet. Although the atmosphere is
tenuous, there are more gas particles in this region than interplanetary space.

Whatever the exact definition of space you use, if you can get above 100 kilometers, I think you deserve your astronaut wings.

This article comes from Universe Today, read more here.